

FOR OFFICIAL USE ONLY

Sub 12

1. An automatically adjusting self tightening wrench comprising:
a handle having a gripping end and a working end;
a jaw member rotationally attached at an attachment end at a fixed point to said working end of said handle;
said working end having a curved handle face;
said jaw member having a planar face opposing said curved handle face;
means to bias said planar face of said jaw member toward said handle face;
said planar face following a generally circular path around said pin when said jaw member is rotated thereby moving from a first point a minimum distance from said curved handle face to a second point a maximum distance from said curved handle face whereby said automatically adjusting self tightening wrench may be placed over an object to be rotated and said object size is accommodated by rotation of said jaw member increase or decrease between said curved handle face and said planar face.

Sub C1

2. The automatically adjusting self tightening wrench of claim 1 additionally comprising said planar face and said curved handle face both having a gripping surface thereon said gripping surface shaped to aid the frictional engagement with said object placed therebetween.

3. The automatically adjusting self tightening wrench of claim 1 additionally comprising a finger depressed means to overcome said

means to bias said planar face of said jaw member toward said handle face.

4. The automatically adjusting self tightening wrench of claim 2 additionally comprising a finger depressed means to overcome said means to bias said planar face of said jaw member toward said handle face.

sub
5. The automatically adjusting self tightening wrench of claim 1 wherein said means to bias said planar face of said jaw member toward said handle face is a spring attached at a first end to said working end of said handle and at a second end to said jaw member.

6. The automatically adjusting self tightening wrench of claim 1 additionally comprising a slot formed in said handle at said working end, said slot adjacent to said fixed point whereby said jaw member rotationally translates into said slot when rotating around said fixed point attachment to said working end of said handle.

7. The automatically adjusting self tightening wrench of claim 2 additionally comprising a slot formed in said handle at said working end, said slot adjacent to said fixed point whereby said jaw member rotationally translates into said slot when rotating

around said fixed point attachment to said working end of said handle.

8. The automatically adjusting self tightening wrench of claim 4 additionally comprising a slot formed in said handle at said working end, said slot adjacent to said fixed point whereby said jaw member rotationally translates into said slot when rotating around said fixed point attachment to said working end of said handle.

9. The automatically adjusting self tightening wrench of claim 5 additionally comprising a slot formed in said handle at said working end, said slot adjacent to said fixed point whereby said jaw member may translate into said slot when rotating around said fixed point attachment to said working end of said handle.

10. The automatically adjusting self tightening wrench of claim 3 wherein said finger depressed means to overcome said means to bias said planar face of said jaw member toward said handle face is a finger engageable surface area formed on said jaw member.

11. The automatically adjusting self tightening wrench of claim 4 wherein said finger depressed means to overcome said means to bias said planar face of said jaw member toward said

handle face is a finger engageable surface area formed on said jaw member.

12. The automatically adjusting self tightening wrench of claim 6 wherein said finger depressed means to overcome said means to bias said planar face of said jaw member toward said handle face is a finger engageable surface area formed on said jaw member.

13. The automatically adjusting self tightening wrench of claim 1 wherein said jaw member is comprised of a first jaw member strut between said fixed attachment point and an elbow which is in angled engagement with a second jaw member strut from said elbow to said planar face; and

said angled engagement determining a circular path followed by said planar face around said curved handle face when said jaw member is rotated.

14. The automatically adjusting self tightening wrench of claim 2 wherein said jaw member is comprised of a first jaw member strut between said fixed attachment point and an elbow which is in angled engagement with a second jaw member strut from said elbow to said planar face; and

said angled engagement determining a circular path followed by said planar face around said curved handle face when said jaw member is rotated.

FOOTNOTES

15. The automatically adjusting self tightening wrench of claim 3 wherein said jaw member is comprised of a first jaw member strut between said fixed attachment point and an elbow which is in angled engagement with a second jaw member strut from said elbow to said planar face; and

said angled engagement determining a circular path followed by said planar face around said curved handle face when said jaw member is rotated.

16. The automatically adjusting self tightening wrench of claim 6 wherein said jaw member is comprised of a first jaw member strut between said fixed attachment point and an elbow which is in angled engagement with a second jaw member strut from said elbow to said planar face;

said first jaw member rotationally engaged with said fixed point and rotationally translating in said slot; and

said angled engagement determining a path followed by said planar face around said curved handle face when said jaw member is rotated.

17. The automatically adjusting self tightening wrench of claim 7 wherein said jaw member is comprised of a first jaw member strut between said fixed attachment point and an elbow which is in angled engagement with a second jaw member strut from said elbow to said planar face;

said first jaw member rotationally engaged with said fixed point and rotationally translating in said slot; and

said angled engagement determining a path followed by said planar face around said curved handle face when said jaw member is rotated.

18. The automatically adjusting self tightening wrench of claim 8 wherein said jaw member is comprised of a first jaw member strut between said fixed attachment point and an elbow which is in angled engagement with a second jaw member strut from said elbow to said planar face;

said first jaw member rotationally engaged with said fixed point and rotationally translating in said slot; and

said angled engagement determining a path followed by said planar face around said curved handle face when said jaw member is rotated.